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IMPACT OF CHINESE COMMUNIST NUCLEAR WEAPONS PROGRESS ON UNITED STATES NATIONAL SECURITY

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IMPACT OF CHINESE COMMUNIST NUCLEAR WEAPONS PROGRESS ON UNITED STATES NATIONAL SECURITY

Introduction

The Joint Committee on Atomic Energy is charged under the Atomic Energy Act of 1954 with making continuing studies of problems relating to the development, use and control of atomic energy. In recognition of the important responsibility assigned to the Joint Committee, the Atomic Energy Act of 1954 imposes upon the Atomic Energy Commission and the Department of Defense a mandatory obligation to "keep the Joint Committee fully and currently informed" on atomic energy matters. All other Government agencies are required by law to furnish any information requested by the Joint Committee with respect to the activities or responsibilities of that agency in the field of atomic energy.

One of the crucial matters affecting U.S. national security is the development by foreign nations of nuclear weapons and the accompanying delivery systems. The present nuclear threat to the United States and the free world comes from the Soviet Union and Communist China. In order properly to understand the scope and magnitude of this threat, the Joint Committee has over the years held executive hearings at which nuclear weapons experts have charted the progress of foreign nations as they developed and refined their nuclear arsenals.

The emergence of a serious threat from the Chinese Communists began in 1964. In a brief span of less than 3 years, Red China has had six nuclear tests. The last one on June 17, 1967, was in the megaton range and indicated that they were making rapid progress in thermonuclear design. They are also making progress in the development of delivery vehicles for megaton weapons. The internal strife in Red China appears to have had little, if any, effect on their nuclear weapons program to date.

The trends in nuclear weapons development by foreign nations have been followed closely by the Joint Committee. These trends have been borne out by subsequent events. Progress, particularly by Red China, has been more rapid and surprisingly more effective than had been expected or indeed predicted.

The nuclear and thermonuclear capabilities of the Soviet Union are generally well known and understood by the American public. The Joint Committee's intention in this report is to bring into perspective the accomplishments and possible future trends in the development of Red China's nuclear offensive force.

Background

As the nuclear threat posed by the Chinese Communists became more pronounced, Chairman Pastore decided to conduct a special inquiry regarding Chinese Communist nuclear weapons development.

This probe began on January 11, 1967, and was formally announced at the Joint Committee's first public hearing of the 90th Congress on January 25, 1967.

In connection with this study the Joint Committee received the following testimony in executive session:

January 11, 1967: Richard Helms, Director of the Central Intelligence Agency.

February 1, 1967: Dr. Norris Bradbury, Director, Los Alamos Scientific Laboratory, and Dr. Michael May, Director, Livermore Radiation Laboratory.

Mar. 13, 1967: Secretary of State Dean Rusk.

July 13, 1967: Representatives of the Department of Defense, CIA, and AEC.

These witnesses presented testimony concerning advances being made by Communist China in developing nuclear weapons as well as their progress in developing the capability to deliver these weapons against neighboring countries or the United States.

Detailed technical presentations were heard concerning each individual Chinese Communist nuclear test and an assessment was made of future developments by Red China in the field of nuclear weapons and associated delivery systems.

An analysis of the impact of the emergence of Red China as a nuclear power on U.S. foreign policy with particular emphasis on the proposed nonproliferation treaty was also presented.

Information concerning French and Soviet nuclear weapons and delivery methods were also discussed but principal emphasis was on Red China.

Conclusions

On the basis of various hearings we have had and studies made by the Joint Committee, the following committee conclusions have been developed:

1. *Chinese Nuclear Weapons Capabilities*

The Chinese Communist test of June 17, 1967, at the Lop Nor Nuclear Test Site was her sixth nuclear test in the atmosphere and her first in the megaton range. Such a test was expected because of the success of the preceding thermo-nuclear experiment conducted on December 28, 1966. The Chinese purposely may have limited the yield of that test—their fifth test—to keep the fallout in China at an acceptable level. The fifth test indicated that the Chinese had taken a major step toward a thermonuclear weapon.

There is evidence that the sixth test device—with a yield of a few megatons—was dropped from an aircraft.

Analysis of the debris indicates use of U^{235}, U^{238}, and thermonuclear material. As in the other tests, there is no evidence that plutonium was used. The preliminary indication is that a considerable improvement accompanied the increase in yield. A large amount of U^{238} was used in the device.

The sixth Chinese nuclear test has confirmed the conclusion reached from the analysis of the fifth Chinese nuclear test that they are making excellent progress in thermonuclear design. They now have the capability to design a multimegaton thermonuclear device suitable for delivery by aircraft.

We believe that the Chinese will continue to place a high priority on thermonuclear weapon development. With continued testing we believe they will be able to develop a thermonuclear warhead in the ICBM weight class with a yield in the megaton range by about 1970. We believe that the Chinese can have an ICBM system ready for deployment in the early 1970's. On the basis of our present knowledge, we believe that the Chinese probably will achieve an operational ICBM capability before 1972. Conceivably, it could be ready as early as 1970–1971. But this would be a tight schedule and makes allowance for only minor difficulties and delays. We believe that the Chinese have already completed the development of a medium range ballistic missile. We have no indication of any deployment.

We also believe that by about 1970 the Chinese Communists could develop a thermonuclear warhead with a yield in the few hundreds of kilotons in the MRBM class and that they could develop an MRBM warhead with a megaton yield about a couple of years later. Meanwhile, should they desire a thermonuclear bomb for delivery by bomber, they could probably begin weaponizing the design employed in the sixth test.

The missile-delivered fourth Chinese test demonstrated that the Chinese now have the capability to design a low yield fission warhead compatible in size and weight with a missile. With a few tests, the Chinese could probably design an improved fission weapon for MRBM or bomber delivery. However, they may forego extensive fission weapon production in order to have materials and facilities available for thermonuclear weapon systems.

The Chinese bomber forces consist of a few hundred short-range jet bombers and a handful of somewhat longer range bombers. We have no knowledge of a Chinese plan to develop heavy intercontinental range bombers.

Earlier, the Communist Chinese conducted four other nuclear detonations:

October 16, 1964: Low yield (up to 20 kilotons).
May 13, 1965: Low intermediate (20 to 200 kilotons).
May 9, 1966: Intermediate (lower end of 200 to 1,000 kiloton range).
October 27, 1966: Low intermediate (20 to 200 kilotons).

The Chinese were able to continue their nuclear program after the Soviets apparently ceased technical assistance in this area by 1960, and detonated a uranium device in October 1964.

All of the Chinese detonations have utilized enriched uranium (U^{235}) as the primary fissionable material. Uranium-238 was also present in all tests. The detonation of any device which also contains U^{238} results in some fissioning of the U^{238}. The debris from their third and fifth tests indicated some thermonuclear reactions had involved lithium-6 in those devices.

We believe that the Chinese are interested in the development of submarines equipped with suitable relatively long-range missiles; at this time we have not determined the exact nature or status of the program.

2. French Nuclear Test Program

Turning to the French nuclear test program, in February 1960 the French tested their first atomic device. In 1966 the French conducted five nuclear tests. In 1967 they held a short series of three tests. Another series of tests is planned for next summer. All of the 1966 tests were plutonium fission devices. The last two tests in 1966 were experiments aimed at the thermonuclear development.

The year's tests were conducted on June 5, June 27, and July 2. They were suspended by balloons, above the Mururoa Lagoon. The tests all had low yields. The French announced that all of the tests were to be of triggers for thermonuclear devices which the French still have not tested.

Although French officials continue to state publicly that France will detonate her first thermonuclear device in 1968 when enriched uranium becomes available, there have been hints in the press that France is having difficulties with its program. Should this be true, the first generation of both the land-based and submarine-launched missile systems might have to use warheads developed in the 1966 series.

To recapitulate, the Chinese are well ahead of the French in thermonuclear weapon design. In 2½ years and six tests the Chinese have successfully tested a multimegaton thermonuclear device. The French, on the other hand, have conducted many more tests over a 7-year period and have not yet tested a true thermonuclear device or achieved a megaton size yield.

The French have developed higher yield fission weapons than the Chinese. The French have achieved yields of up to 250 kilotons while the Chinese fission devices have had lower yields.

The French now have an operational strategic force of about 60 Mirage IV aircraft with a stockpile of 60 to 70 KT nuclear weapons. At this time the Chinese do not have such an operational strategic force.

SUMMARY

The Joint Committee believes that the American public needs to know the threat that is posed by Red China. Communist China has emerged with a fledgling, but effective, nuclear weapons capability. This capability has and will continue to have a great effect on U.S. foreign policy in the Far East. It will have an effect on our relations with the South East Asia Treaty Organization. It will have an effect on the nonproliferation treaty principally because of the close connection between Chinese nuclear power and the national security of India. Its effect will also be felt by Japan. Moreover, the Chinese Communists could use nuclear blackmail to assert their position not only broadly in Asia, but specifically in Southeast Asia.

Perhaps most significant for the United States is the fact that a low order of magnitude attack could possibly be launched by the Chinese Communists against the United States by the early 1970's. At present we do not have an effective anti-ballistic-missile system which could repel such a suicidal (for the Chinese) but nevertheless possible strike.

It is for these reasons that the Joint Committee feels the assessment it has made, based upon information received in executive sessions, should be brought before the American public—not to overemphasize or to underplay but to state clearly and concisely with due regard for the protection of intelligence sources where we stand in relation to this emerging threat to our national security.

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